

NHLBI Systems Biology Grantee Meeting Agenda

September 10 & 11, 2015

6701 Rockledge Drive, 9th Floor Conf Room 9100/9104
Bethesda, MD 20892

9am	Introductions and Greetings Pankaj Qasba September 10, 2015
NHLBI Program Office Report	
Study updates: <i>30minute reports followed by 10 minutes of discussion</i>	
9:10- 9:50am	Study 1: Combining wet lab and computational simulations to predict protective immune responses to <i>Mycobacterium tuberculosis</i>. <i>Kirschner, D. E., Linderman, J. J. and Flynn, J. L</i>
9:50 -10:30am	Study 2: Towards T-cell specification in silico - deferral of commitment and irreversibility <i>Carsten Peterson</i> Molecular mechanisms of T-cell lineage commitment at the single-cell level <i>Ellen V. Rothenberg</i>
10:30 – 11:10am	Study 3: Blood Systems Biology <i>Scott L. Diamond, Lawrence (Skip) Brass and Talid Sinno</i>
11:10 – 11:25am	BREAK
11:25 – 12:10	Study 4: Experimental and computational investigation of the biorheological characteristics of sickle cells under hypoxic conditions <i>George Em Karniadakis</i>
12:10 – 12:50pm	Study 5: A systems biology approach to predicting bleeding in hemophilia and von Willebrand disease <i>Keith Neeves, Karin Leiderman, Aaron Fogelson and Jorge Di Paola</i>
12:50-3:00pm	WORKING LUNCH -Discussion-Moving Forward- (Co-Chairs: Diamond, Kirschner and Subramaniam)
3:00- 3:40pm	Study 6: Platelet Systems Biology in Health and Disease <i>Wadie F. Bahou , Wei Zhu, Song Wu, Dmitri V. Gnatenko and Zong-Dong Li</i>
3:40 – 4:10pm	Study 7: • Temporally encoded Ca²⁺ instability in heart underlies a class of inherited lethal arrhythmias <i>Ullah Aman, W. J. Lederer and M. Saleet Jafri</i> Ca²⁺-Induced Arrhythmias: The Role of NCX1 in Ca²⁺-Induced Ca²⁺ Release <i>Chu, L., Winslow, R. L., Greenstein, J. L., Jafri, M. S., Lederer, W. J., Williams, G. S. B.</i>
4:10 -4:50pm	Study 8: • Systems Biology Analysis of Human Erythropoiesis, MPI <i>Stuart Orkin and Guo-Cheng Yuan</i>
5:00pm	MEETING ADJOURN for the DAY

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9:00-9:40am

Study 9: Studies of the human glycome in the context of pulmonary airway inflammation

Sriram Neelamegham, Jun Qu and Joseph Lau

9:40-10:20am

Study 10: Modeling brainstem neural circuits responsible for the production of repetitive coughing: gain, phase timing, and implications for the mechanism of action of cough suppressant drugs

DC Bolser, KF Morris, LS Segers, BG Lindsey, PW Davenport and TE Pitts

10:20-11:00am

Study 11: Systems Biology Analyses for Hemodynamic Regulation of Vascular Homeostasis.

Shu Chien, John Y-J Shyy, and Shankar Subramaniam

11:00 – 11:20am

BREAK

11:00-12:20pm

Study 12: Genetic diversity operates through chromatin gene cohorts to determine susceptibility to cardiac hypertrophy

Elaheh Karbassi, Emma Monte, Douglas J. Chapski, Rachel Lopez, Manuel Rosa Garrido, Nicholas Wisniewski, Christoph D. Rau, Jessica J. Wang, James N. Weiss, Yibin Wang, Aldons J. Lusis, and Thomas M. Vondriska

12:00-12:45pm

Study 13: Microenvironmental regulation of VEGF concentration and VEGFR2 signaling by the extracellular matrix: a computational analysis of pro-angiogenic therapies.

Lindsay Clegg and Feilim Mac Gabhann

12:45 – 2:00pm

LUNCH

2:00- 2:40pm

Study 14: A Multi-Scale Approach to Cardiac Arrhythmias: from the Molecule to the Organ

Gideon Koren, Bum-Rak Choi, Diane Hoffman-Kim, Alain Karma, Ulrike Mende, Xuwen Peng, Zhilin Qu and Dmitry Terentyev

2:40-3:10PM

Study 15: Identification of CaMKII δ cardiomyocyte signaling network by quantitative phosphoproteomics profiling by Mass Spectrometry

Sukriti Dewan, Alex Campos, Shuangding Wu, Alex Wolf, Donald M. Bers, Laurence M. Brill, Joan H. Brown and Andrew McCulloch

3:10-3:50PM

Study 16: Triggered Intracellular Calcium Waves and Atrial Fibrillation in Normal and Failing Dog Hearts

Yohannes Shiferaw, Gary L. Aistrup, J. Andrew Wasserstrom

3:50-4:00PM

WRAP UP AND CLOSING REMARKS